



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,258	07/11/2003	Mitsuhiko Kitagawa	81788.0252	3224
26021	7590	06/07/2005	EXAMINER	
HOGAN & HARTSON L.L.P. 500 S. GRAND AVENUE SUITE 1900 LOS ANGELES, CA 90071-2611			PHAM, LONG	
			ART UNIT	PAPER NUMBER
			2814	

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,258

Applicant(s)

KITAGAWA ET AL.

Examiner

Long Pham

Art Unit

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 11-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,9 and 32-34 is/are rejected.
- 7) ☒ Claim(s) 4 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings were received on 03/29/05. These drawings are approved.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1, 2, 9, 32, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicants' admitted prior art (AAPA) of this application in combination with Hiyoshi (US 5,734,703) and Umeji (US 4,614,873).

With respect to claim 1, AAPA teaches a MEMS apparatus comprising (see The Related Art on pages 1-2 and figs. 12 and 13A-13E of this application): a MEMS assembly driven by a voltage.

AAPA fails to teach that the voltage is generated by a light-receiving circuit or device that receives light from a light emitting circuit or device.

Hiyoshi teaches using a light-receiving circuit or device that receives light from a light emitting circuit or device to generate voltage. See col. 35, lines 58-65.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to generate voltage for the apparatus of AAPA as taught by Hiyoshi because the generated voltage can be controlled by controlling the intensity of the received light. See col. 35, lines 58-65.

Further with respect to claim 1, Hiyoshi fails to teach that the light-receiving circuit has series-connected light receiving devices.

Umeji teaches connecting light receiving devices or elements in series to control the voltage. See col. 1, lines 60-68.

It would have been obvious to one of ordinary skill in the art of making semiconductor devices to connect the light receiving devices or elements in series in the apparatus of AAPA and Hiyoshi to obtain the above benefit.

With respect to claim 2, AAPA further teaches the MEMS assembly includes an RF-MEMS switch. See the Related Art on pages 1-2 and figs. 12 and 13A-13E of this application.

With respect to claim 9, AAPA also fails to teach that the MEMS apparatus includes a voltage discharge circuit.

However, the inclusion of a voltage discharge circuit is well-known to one of ordinary skill in the art of making semiconductor devices.

With respect to claim 32, AAPA also fails to teach that the MEMS apparatus includes a MEMS mirror.

However, the inclusion of a MEMS mirror is well-known to one of ordinary skill in the art of making semiconductor devices.

With respect to claim 33, AAPA also fails to teach that the MEMS apparatus includes a MEMS optical switch.

However, the inclusion of a MEMS optical switch is well-known to one of ordinary skill in the art of making semiconductor devices.

With respect to claim 34, AAPA also fails to teach that the MEMS apparatus includes a MEMS actuator.

However, the inclusion of a MEMS actuator is well-known to one of ordinary skill in the art of making semiconductor devices.

Response to Arguments

2. Applicant's arguments filed 03/29/05 have been fully considered but they are not persuasive. See below.

In response to the applicant's arguments in the paragraph at the middle of page 10 of the response dated 03/29/05, it is submitted that Hiyoshi teaches using

a light-receiving circuit or device that receives light from a light emitting circuit or device to generate voltage that can be controlled.

In response to the applicant's arguments in the paragraph at the bottom of page 10 of the response dated 03/29/05, it is submitted that the Umeji is being relied on only for the teaching of connecting light emitting devices in series to control the voltage. Further, it is submitted that AAPA in combination with Hiyoshi teach a light-receiving circuit or device that receives light from a light emitting circuit or device to generate voltage.

Allowable Subject Matter

3. Claims 4 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Long Pham whose telephone number is 571-272-1714. The examiner can normally be reached on M-F, 7:30AM-3:00PM.

Art Unit: 2814

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Long Pham

Primary Examiner

Art Unit 2814

LP